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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/943,633	08/30/2001	Earl Van Wagoner III	170943-00001	9389

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EXAMINER

LE, JOHN H

ART UNIT PAPER NUMBER

2863

DATE MAILED: 12/17/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/943,633

Applicant(s)

WAGONER, EARL VAN

Examiner

John H Le

Art Unit

2863

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 12-14 is/are rejected.
- 7) ☒ Claim(s) 10 and 11 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4, 5, 6. 6) ☐ Other: ____

DETAILED ACTION

Claim Objections

1. Claims 1-2, and 10 are objected to because of the following informalities:
Claim 1, line 4, "A" should change to -a--, line 7, "B" should change to -b--,
line 10, "C" should change to -c--.
Claim 2, line 3, "D" should change to -d--, line 5, "E" should change to -e--,
line 7, "F" should change to -f--, line 10, "G" should change to -g--.
Claim 10, line 4, what are (g), (d), (a)? "X" should change to -x--.
Appropriate correction is required.

Information Disclosure Statement

2. The information disclosure statement filed 12/27/2001 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because IDS does not belong to this application. The serial number is correct, however the applicants name and filing date are wrong. It has been placed in the application file, but the information referred to therein has not been considered as to the merits. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609 ¶ C(1).

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 3, 12 are rejected under 35 U.S.C. 102(b) as being anticipated by FitzGerald (USP 5,382,958).

Regarding claims 1, FitzGerald teaches a process for determining an impact location of a transmitter bearing object within a geographical area containing a target (Fig.1), wherein the process comprises the steps of providing an object with a

Art Unit: 2863

transmitter which upon activation transmits a unique signal, wherein the transmitter includes a non synchronized time/frame counter to indicate a length of time during which the signal is transmitted (Fig.5), providing at least three stations for receiving data contained in the signal transmitted from the object (e. g, Col.2, lines 36-68) and then transferring the data to a central processing station (e. g, Col.3, line 55-Col.4, line 21); and providing means at the central processing station to use the data in performing calculations to determine the impact location of the object (e. g, Col.4, lines 22- 51).

Regarding claim 3, FitzGerald teaches a process, wherein the transmitter-bearing object is military vehicle (Fig.1).

Regarding claim 12, FitzGerald teaches a process wherein the impact locations of a plurality of transmitter-bearing objects can be determined (Col.2, lines 36-68).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over FitzGerald (USP 5,382,958) in view of Sanderford et al. (USP 5,717,406).

FitzGerald fails to teach the process comprises the steps of determining the linear distances between the receiving stations and the central processing station, defining the spatial plane by a coordinate system to perform the calculations at the central processing station, whereby the spatial plane is correlated to the geographical

plane of the target range by an algorithm; and determining correction factors which are used to adjust for signal delays in transferring data from the receiving stations to the central processing station, whereby the correction factors are based upon the differences in linear distances between the receiving stations and the central processing station.

Sanderford et al. teach the process comprises the steps of determining the linear distances between the receiving stations and the central processing station, defining the spatial plane by a coordinate system to perform the calculations at the central processing station, whereby the spatial plane is correlated to the geographical plane of the target range by an algorithm; and determining correction factors which are used to adjust for signal delays in transferring data from the receiving stations to the central processing station, whereby the correction factors are based upon the differences in linear distances between the receiving stations and the central processing station (Col.6, lines 43-Col.9, line 12).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the process steps as taught by Sanderford et al. in the time transfer position location apparatus of FitzGerald for purpose of providing intelligent averaging or weighting of previous position fixes in order to further enhance the accuracy of the most recent position fix (Col.2, lines 55-57).

7. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over FitzGerald (USP 5,382,958) in view of Morton (USP 6,318,667).

FitzGerald fails to teach a process, wherein the transmitter-bearing object is a bomb.

Morton teaches a process, wherein the transmitter-bearing object is a bomb (Col.5, lines 18-31).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the transmitter-bearing object is a bomb as taught by Morton in the time transfer position location apparatus of FitzGerald for purpose of providing a method to guide a bomb from a launch aircraft at a extended distance from the target by causing the bomb to glide to the target by wings or other lift surfaces on the bomb (Col.3, lines 55-58).

8. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over FitzGerald (USP 5,382,958) in view of Cargill (USP 5,432,546).

FitzGerald fails to teach a process, wherein the transmitter-bearing object is a practice bomb.

Cargill teaches the transmitter-bearing object is a practice bomb (Col.4, lines 24).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the transmitter-bearing object is a practice bomb as taught by Cargill in the time transfer position location apparatus of FitzGerald for purpose of providing a military weapon system capable of providing timely and accurate video data that show the point-of-impact of a weapon (Col.2, lines 31-35).

9. Claims 6, 7, 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over FitzGerald (USP 5,382,958) in view of Dupray (USP 6,249,252).

Regarding claim 6, FitzGerald fails to teach the process, wherein the target is a physical or nonphysical thing.

Dupray teaches the process, wherein the target is a physical (Col.56, lines 42-56).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to inform the process, wherein the target is a physical as taught by Dupray in the time transfer position location apparatus of FitzGerald for purpose of providing a method and system for performing wireless mobile station location (Col.12, lines 40-44).

Regarding claims 7 and 8, FitzGerald fails to teach the process, wherein the target is an enemy ship, munitions storehouse, personnel location; communications facility or a set of grid coordinates.

Dupray teaches the process, wherein the target is a set of grid coordinates (Col.70, lines 3-20).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to inform the process, wherein the target is a set of grid coordinates as taught by Dupray in the time transfer position location apparatus of FitzGerald for purpose of providing a method and system for performing wireless mobile station location (Col.12, lines 40-44).

10. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over FitzGerald (USP 5,382,958) in view of Ishikawa (USP 6,329,948).

Regarding claim 9, FitzGerald fails to teach the process, wherein the receiving stations create a spatial plane, which does not include the target.

Ishikawa teaches the process, wherein the receiving stations create a spatial plane, which does not include the target (Col.56, lines 42-56).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to inform the process, wherein the target is a physical as taught by Dupray in the time transfer position location apparatus of FitzGerald for purpose of providing a method and system for performing wireless mobile station location (Col.12, lines 40-44).

11. Claim 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over FitzGerald (USP 5,382,958) in view of Marsh (USP 6,057,759).

FitzGerald fails to teach a process, wherein the wherein the signal ceases upon impact of the transmitter-bearing object, a process, wherein the signal continues after impact of the transmitter-bearing object, a process, wherein there is no impact of the transmitter-bearing object.

Marsh teaches a process, wherein the wherein the signal ceases upon impact of the transmitter-bearing object, a process, wherein the signal continues after impact of the transmitter-bearing object, a process, wherein there is no impact of the transmitter-bearing object (Col.7, lines 16-Col.8, line 40).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the process, wherein the wherein the signal ceases upon impact of the transmitter-bearing object, a process, wherein the signal continues after

impact of the transmitter-bearing object, a process, wherein there is no impact of the transmitter-bearing object as taught by Marsh in the time transfer position location apparatus of FitzGerald for purpose of providing a system for detecting and locating overboard personnel of a vessel (Col.2, lines 31-52).

Allowable Subject Matter

12. Claims 10-11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 10, none of the prior art of record teaches or suggests a process for determining an impact location of a transmitter bearing object within a geographical area containing a target, wherein the calculations performed at the central processing station are performed using the following mathematical formula:

$$\cos^{-1} \left(\frac{(x+t_2)^2 + (x+t_1)^2 - D_3^2}{2(x+t_2)(x+t_1)} \right) + \cos^{-1} \left(\frac{x^2 + (x+t_2)^2 - D_2^2}{2(x+t_2)x} \right) + \cos^{-1} \left(\frac{(x+t_1)^2 + x^2 - D_1^2}{2(x+t_1)x} \right) = 360$$

wherein X is the unknown amount of time required for the signal upon impact of the transmitter-bearing object to reach the closest receiving station, the receipt of the signal serving to activate the counters at each receiving station; t_1 is the amount of time in addition to X required for the signal upon impact of the transmitter-bearing object to reach the next closest receiving station; t_2 is the amount of time in addition to X required for the signal upon impact of the transmitter-bearing object to reach the farthest

Art Unit: 2863

receiving station; D_1 is the distance between the first and second receiving stations; D_2 is the distance between the first and third receiving stations; and D_3 is the distance between the second and third receiving stations.

Contact Information

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Le whose telephone number is (703) 605-4361.

The examiner can normally be reached on Monday to Friday from 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. John Barlow, can be reached at (703) 308-3126. The facsimile number for Technology Center 2800 is (703) 308-5841.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist of the Technology Center whose telephone number is (703) 308-0956.

John Le

Patent Examiner-Group 2863

December 12, 2002



BRYAN BUI
PRIMARY EXAMINER

12/13/02